

All-Optical Wavelength Converter Circuit

ABSTRACT OF THE DISCLOSURE

A method and apparatus for transferring information of an optical information-bearing signal from a first wavelength to a second wavelength. The method is implemented in an all-optical wavelength converter circuit which includes a laser diode in communication with a polarization controller. An information-bearing signal having a first wavelength is input to the circuit. A polarization controller adjusts the polarization of the information-bearing signal. The laser diode receives the polarization-adjusted information-bearing signal and generates a converted information-bearing signal by transferring the information of the polarization-adjusted information-bearing signal from the first wavelength to the second wavelength. The polarization controller receives the converted information-bearing signal from the laser diode, and polarizes the converted information-bearing signal.